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ABSTRACT

The characteristics of the approximately 2,800 children (in 21 states) enrolled in 24 child service demonstration centers for the learning disabled were evaluated. Focused on were questions such as ages of children, intellectual level, sex distribution, and methods used for the delivery of services. Among findings were that the median IQ was 93; that the children were retarded an average of 1.7 grades in reading, 1.2 grades in arithmetic, and 1.8 grades in spelling; that the median chronological age was 8 years 10 months; that there were approximately three boys to each girl receiving services; and that the resource room was the most commonly used method for delivery of services. Results suggested that children enrolled in child service demonstration centers frequently do not fit the federal definition of specific learning disabilities in that many children are equally retarded in reading, spelling, and arithmetic; are minor or moderate in their degree of underachievement; and have IQs below 90. (DB)

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CHARACTERISTICS OF CHILDREN ENROLLED IN THE CHILD SERVICE DEMONSTRATION CENTERS

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EC 073 601

RESEARCH REPORT

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Leadership Training Institute in Learning Disabilities

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CHARACTERISTICS OF CHILDREN ENROLLED IN THE CHILD SERVICE DEMONSTRATION CENTERS

Introduction

The field of learning disabilities has probably the widest parameters of all the fields of special education. To some the field is unlimited and encompasses all children who are not coping with the school environment in conformity with the expectations of their parents and teachers. It includes most all handicapped children except those with severe handicaps that require highly specialized programs, the totally deaf, the totally blind, the severely retarded or seriously emotionally disturbed. To some, mentally retarded children are considered to have generalized learning disabilities and attempts have been made to change the label "mental retardation" to "general learning disabilities."

To delimit the field the National Advisory Committee on the Handicapped recommended a definition to Congress in 1968 which was included in the Federal Register, October, 1973. It read:

> "'Children with specific learning disabilities' means those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematic calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. Such term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, of emotional disturbance, or of environmental disadvantage."[1]

Since the passage of the Learning Disabilities Act of 1969, the Office of Education has allotted funds to 44 states for the purpose of organizing Child Service Demonstration Centers in Learning Disabilities. Although all states have recognized the Federal definition of learning disabilities, it was natural for them to develop their programs in conformity with their own concepts of learning disabilities. This situation provided an opportunity to study empirically the kinds of children admitted to these projects and the varying emphases in remediation.

This report analyzes the data furnished by one-half of the demonstration projects. Some projects were just beginning and did not have data; others were involved only in diagnosis or planning and did not have analyzable data. A few projects were so divergent that their data were not compatible with that of the larger group. This report includes data that were ultimately collected on 24 projects in 21 states.

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[1]Department of Health, Education, and Welfare. U.S. Office of Education. Federal Register. Washington,D.C.: U.S. Government Printing Office. Vol. 38, no. 196. October 11, 1973. p.28230-31

The Problem

To determine the characteristics of children enrolled in the Child Service Demonstration Centers, data were collected on two general dimensions: (1) the emphases on remediation, and (2) the characteristics of the children. Other ancillary data were also collected. The data sheet that was used for the collection of the data is included in Appendix A.

The data from these projects were examined in an attempt to answer a number of questions including:

1. Ages of children served in the centers.
2. The intellectual level of the children enrolled in these centers.
3. The sex distribution.
4. The percentage of the local school population served in the centers.
5. The major emphasis in remediation (including remedial reading, arithmetic, spelling, visual perception, etc.).
6. The degree of disability as rated by the teacher in terms of severe, moderate, and mild.
7. The academic retardation, defined as the discrepancy between age and academic achievement.
8. The method used for the delivery of service in terms of resource rooms, itinerant teachers, etc.
9. Other information.

The data supplied by each state were analyzed separately. The data from two states were not appropriate for comparison with other states, while one state provided four groups of data which were analyzed separately. In general, median values and high and low contrasts were used to draw conclusions from the data.

Results

Age Distribution

Table 1B in Appendix B presents the age distribution across the 21 states (24 projects). The age of children served in these projects is summarized as follows:

1. The median age of children served in the project was eight years and ten months (8-10 yrs).
2. The lowest mean age for the states was seven years, two months (7-2 yrs).
3. The highest mean age for the states was fifteen years, two months (15-2 yrs).

It is obvious from these figures that the bulk of the children enrolled in the demonstration projects comes from the lower elementary grades and kindergarten. Only three projects dealt exclusively with secondary age children, while 16 projects were involved in elementary school children, and 3 projects included kindergarten children.

Intelligence

Different projects used different methods of determining the intellectual level of the children. The major intelligence tests used were the WISC, the Peabody Picture Vocabulary Test, and the Slosson Test. In general the number of children reported with IQ data was less than the number of children served in the projects.

Table 2B in Appendix B shows the IQ distribution for the 21 states. (The code numbers 27 a,b,c and d are all from one state and represent self-contained LD classes, classes for emotionally disturbed, LD children in secondary school classes, and LD children in elementary school classes.) Table 2B also gives the IQ data from the different states. A summary of this table indicates that:

1. The mean IQ of the children in the 24 projects ranged from a mean IQ of 83 to a mean IQ of 105, with a median IQ value of 93.
2. Eleven states reported a small percentage of their children as having IQs of 69 and below.
3. Eight (8 percent) of the children across all the projects had IQs between 70-79.
4. Twenty-six (26 percent) of the children across all the projects had IQs bwtween 80-89.
5. From the distribution given above, it appears that approximately 35 percent of the children had IQs below 90, as compared to an average population where 25 percent are below 90 IQ.

Sex Distribution

The sex distribution for the states reported is shown in Table 3B in Appendix B. This table shows that the median percentage of boys is 75 while the median for the girls is 25. These figures were fairly consistent from state to state with approximately 3 boys to 1 girl enrolled in the projects.

Prevalence

Only a small proportion of states were able to record the total population from which their children were drawn, and the number of children served at one time. Information from 13 states was obtained with respect to the number served and the total population from which these children were drawn.

For these 13 states the median percentage of the total population being served was 4 percent. The percentages in the 13 states ranged, however, from 1 percent to 26 percent. The one project that reported 26 percent was a secondary school that included 87 percent of their group as being mild and moderate disabilities with only 13 percent rated as severe.

Of the 13 states reporting prevalence for severe learning disability cases, the median was 2.5 percent (see Table 4). It should be pointed

out that these prevalence figures apply primarily to elementary schools since the median age in the projects was slightly below 9.

In this study we have no substantial information on prevalence of learning disabilities among preschool children. This is understandable since identification of learning disabilities in 3, 4, and 5 year old children is difficult except in extreme cases such as delayed speech and language.

In a related study we reported a procedure which can be used to identify learning disabilities in preschool children by noting significant discrepancies in development.[1] Some evidence was obtained from a separate study on Headstart children using the Illinois Test of Psycholinguistic Abilities (ITPA)[2] that measures 10 separate psychological and linguistic functions. One hundred and one children were tested with the total ITPA and the results compared with accumulated percentage deviations of the standardization population (Paraskevopoulos and Kirk).[3]

If we consider 3 percent of average children having average deviations of 6.6 scaled score and above as learning disabled, we find that among the 101 disadvantaged Headstart children (Blacks, Anglos, and Mexican-Americans), there are 7 percent of deviations of 6.6 and above, or over twice as many as found among average children.[4] The comparison is reported in Table 1.

Table 1

A Comparison of Headstart and Average Children in Prevalence of Learning Disabilities

Average Deviation[4]	Percentage of Average Deviation of Standardization Population for Ages 4-7 to 5-1	Percentage of Average Deviation of 101 Headstart Children --Ages 4 to 5
6.9	0	3
6.8	2	5
6.7	3	6
6.6	3	7

[1]Kirk, S.A. and Elkins,J. Identifying Developmental Discrepancies at the Pre-School Level. In press

[2]_____ Ethnic Differences in Head Start Children. In press

[3]Paraskevopoulos, J.N., and Kirk, S.A. The Development and Psychometric Characteristics of the Revised Illinois Test of Psycholinguistic Abilities University of Illinois Press, 1969, p. 141

[4]The average deviation is calculated by summing the deviations of each subtest from the child's mean scaled score, disregarding the sign, and dividing by 10.

Remedial Focus

One of the indices that may help determine the characteristics of learning disabled children is the remedial focus given to these children.

The teachers in the learning disabilities projects in the 21 states that reported data also checked the primary and secondary remedial focus given for each child. The directions given to them were:

> Under "Remedial Areas" write a 1 in the blank for the major remedial emphasis the child is receiving, and a 2 for any secondary remedial work.

Table 2 shows the median (M), high (H), and low (L) values of remedial focus as reported by the 21 states.

It will be noted from the column in Table 2 headed "combined" (including major and minor emphasis) that 80 percent of the emphasis was on remedial reading. This was followed by arithmetic, 52.5 percent, then by spelling, 45 percent, and then by language, 43.5 percent. When we consider the primary emphasis alone, we note that reading is still highest with a median 61.5 percent. Arithmetic is second with 29 percent while language and spelling include 23 and 24 percent respectively.

Many of the teachers rated children in several areas in both primary (1) and secondary (2) remedial focus. These multiple ratings were usually in self-contained classes where the teacher was responsible for education in all subjects, namely reading, writing, arithmetic, and also other processes. Those working with kindergarten learning disability children also tended to check most of the processes except reading. From the figures above, one may conclude that learning disabilities is concerned with approximately two thirds remedial or corrective reading, and one quarter arithmetic disabilities. However, it should be pointed out that one state had only 3 percent listed as remedial reading for both the first and second emphases and one state had zero percentage of "reading" as primary emphasis. Other states, on the other hand gave 100 percent to reading as the first choice and many of them had close to 100 percent.

Although most authorities include severe reading disabilities, with associated process difficulties as specific learning disabilities, it appears from this survey that remedial or corrective reading is the type of disability that most states consider as learning disabilities. One wonders whether the recent emphasis on the "right to read" has made learning disability programs into remedial or corrective reading programs. How school systems differentiate between workers in these two areas is, of course, a question that is not answered by our data.

The Degree of Severity

Teachers were asked to check whether or not the child was considered to be a (1) severe learning disability, (2) moderate learning disability, or (3) mild learning disability. The directions given the teachers read:

Table 2

Median, High and Low Values for the Tables of Remedial Focus

		Combined	(1) Major Emphasis	(2) Minor Emphasis
1. Reading	M	80 %	61.5 %	13.5 %
	H	100	100	58
	L	3	0	0
2. Arithmetic	M	52.5	29	10
	H	90	77	63
	L	14	0	0
3. Spelling	M	45	23	18.5
	H	86	63	53
	L	6	0	2
4. Language	M	43.5	24.5	16
	H	93	80	41
	L	0	0	0
5. Auditory Processing	M	41	16.5	12
	H	79	56	72
	L	0	0	0
6. Visual Processing	M	36.5	14	13.5
	H	87	68	66
	L	0	0	0
7. Work Habits	M	36	13	18
	H	87	65	56
	L	0	0	0
8. Visual Motor	M	31.5	11	12
	H	66	54	41
	L	0	0	0
9. Writing	M	29.5	11.5	10
	H	81	56	63
	L	0	0	0
10. Behavior	M	25.5	12	11
	H	89	65	30
	L	0	0	0
11. Haptic Processing	M	10.5	1.5	3
	H	53	31	51
	L	0	0	0
12. Other	M	6.5	2.5	2.5
	H	58	38	58
	L	0	0	0

Under Degree of Disability check mild for the child who is only slightly disabled and who will not require much remediation; check moderate for the child who is more disabled but who will very likely require a short period (6 months) of training; check severe for the child who is very disabled and who will require a year to three years of individualized instruction.

The tabulations for the 21 states are reported in Table 4B, Appendix B. The results were:

1. The median percentage of children rated as severe was 54 percent with a high of 84 percent and a low of 13 percent.
2. The median percentage of children rated as moderate was 35 percent with a high of 56 percent and a low of 12 percent.
3. The median percentage of children rated as mild was 13 percent with a high of 34 percent and a low of zero percent.

Two raters independently checked 7 of the states. Table 3 presents a comparison between the teacher's ratings and the ratings of rater 1 and rater 2. The two individual raters (the authors) tended to look at the information furnished in terms of chronological age, the IQ or mental age, and the reading, spelling, or arithmetic grades as determined by tests or teachers' estimates. The raters tended to note the degree of discrepancy between presumed potential and achievement. It will be noted in Table 3 that the independent raters using the capacity-achievement criteria judged that the proportion of severe disabilities is considerably less than that rated by the teachers.

Table 3

Comparison of Median Ratings for 7 States of Severe, Moderate and Mild Learning Disabilities

Rater	Degree of Disability			
	Severe	Moderate	Mild	No Disability
Teachers	57	32	11	-
Rater 1	23	36	24	17
Rater 2	25	36	31	8

The teachers rated children as having severe disabilities more than twice as often as the independent raters. The raters also showed that 17 percent and 8 percent, respectively, of the children did not have a learning disability. These were considered as either behavior problems or as children who were retarded educationally and mentally, with no discrepancy between capacity and achievement. (More complete data is included in Appendix B Table 5B).

From the comparison of the independent raters and the teachers, it appears that the percentage of severe learning disabilities as rated by the teachers is inflated. This is probably due partly to the directions given them that "severe is defined as children who will require a year to three years of remediation." Since most such children assigned to a resource room are assigned for the whole year, it is not surprising that teachers overrated severity as compared to the rating criterion utilizing discrepancy between achievement and potential.

The percentage of the total school population of each local unit rated as severe, moderate, or mild by the teachers is presented in Table 4. It should be noted that the median percentage for the severe was 2.5, with a high of 3.6, and a low of .6. The median percentage for the moderate was 1.4, and for the mild, .5.

Table 4

Prevalence of Learning Disability by Severity of Disability

State	Percent rated Severe	Percent rated Moderate	Percent rated Mild
2	3.3	4.7	3.1
3	3.4	2.1	.5
4	1.5	.3	1.4
10	2.5	1.4	0
13	3.0	2.4	.5
14	3.6	1.9	.5
16	.6	.2	.2
21	1.3	.4	.2
23	1.4	.7	.3
26	1.5	1.1	.5
30	2.6	1.2	.2
36	1.3	1.8	1.0
38	3.4	1.5	.8
Median	2.5	1.4	.5
H	3.6	H 4.7	H 3.1
L	.6	L .2	L 0

Discrepancies Between Test Scores and Chronological Age/Grade Placement

Using the information reported by the 24 projects in 21 states, we estimated the grade expectancy from the chronological age, assuming a year by year progress criterion. The difference between grade expectancy (for chronological age) and achievement was calculated for each child.

Table 5 presents the median of the mean values of expected achievement based on CA, actual achievement on standardized tests, and the discrepancies between these two indices. It will be noted from this table that:

1. There was a 1.7 grade discrepancy for reading.
2. There was a 1.3 grade discrepancy for arithmetic.
3. There was a 1.8 grade discrepancy for spelling.

These results indicate that the children in the child service demonstration centers are, on the whole, academically retarded in reading and spelling, and to a lesser degree in arithmetic, as compared to their chronological age.

Table 5

Median Values of Grade Scores, Grade Expectancy, and Retardation in Reading, Arithmetic and Spelling

	Grade Scores	Grade Expectancy	Retardation
Reading	2.1	3.8	1.7
Arithmetic	2.6	3.8	1.2
Spelling	2.0	3.8	1.8

Another way of estimating discrepancies between "capacity" and achievement is to calculate the expectancy from the mental age. We did not do this for each child, but if we estimate the median mental age by the formula IQ X CA we will have 93.1 X 8-10 months or a median MA of 8-2 months for the groups, or a reading grade expectancy of grade 3.1. The median reading grade was 2.1 indicating a median retardation of 1 year below mental age expectancy for the children in the 21 states. This discrepancy can be interpreted as a moderate retardation, rather than a severe disability. This estimate of retardation may explain the discrepancy between the ratings of the teachers and the independent raters on the severity of the disability.

Analysis of Discrepancies by Grade

Appendix C presents the information for age, intelligence, achievement, and amount of retardation by grade for each of the 21 states. Table C1 summarizes the data of the 21 states. A graph of the median amount (by grade) of retardation in reading is presented in Figure 1.

It will be noted from this figure that: (1) the test scores and the teacher's ratings of grade achievement are quite similar, and (2) the retardation in reading (discrepancy between CA and reading achievement) is approximately 1 grade at grades 1 and 2, and increases gradually to a retardation in reading of approximately 4 grades in grade 8. These results are consistent with expected discrepancies since a one-year retardation in grade two, if unchecked, will become a retardation of 2 years in grade 4, and a retardation of 4 years in grade 8. (These data however, represent cross-sectional rather than longitudinal data.) Remediation should decrease this retardation.

Figures 2 and 3 present graphs for retardation in spelling and in arithmetic. These graphs are similar to that in Figure 1, in that there is about 1 grade retardation at grades 1 & 2, and approximately 4 grades retardation at grade 8.

It should be pointed out that the graphs in Figures 1, 2, and 3 do not extend into the kindergarten, since no suitable achievement data was available, and the number of projects above grade 8 were too few to permit a valid estimate of retardation at that level.

Setting in Which Program Was Operated

States listed their method of delivery of service in terms of resource room, itinerant teacher, self-contained classroom, or mainstreaming. The term mainstreaming refers to the practice of keeping the child in the regular classroom with consultant services to the teacher.

The resource room is the most commonly used vehicle for the delivery of services in learning disabilities. Table 6B in Appendix B presents the information on the setting for the delivery of services for each of the states. A summary of this table follows:

1. Eighteen of the 24 projects used resource rooms; six of them used resource rooms exclusively. In another seven projects more than half of the children were served by resource rooms.

2. Eleven of the projects used the itinerant teacher model, but none of the states used this delivery method exclusively.

3. Twelve projects used self-contained classrooms, but only one state used this model exclusively.

4. Mainstreaming was the least used delivery method since nine states used this procedure while only one state used the procedure exclusively.

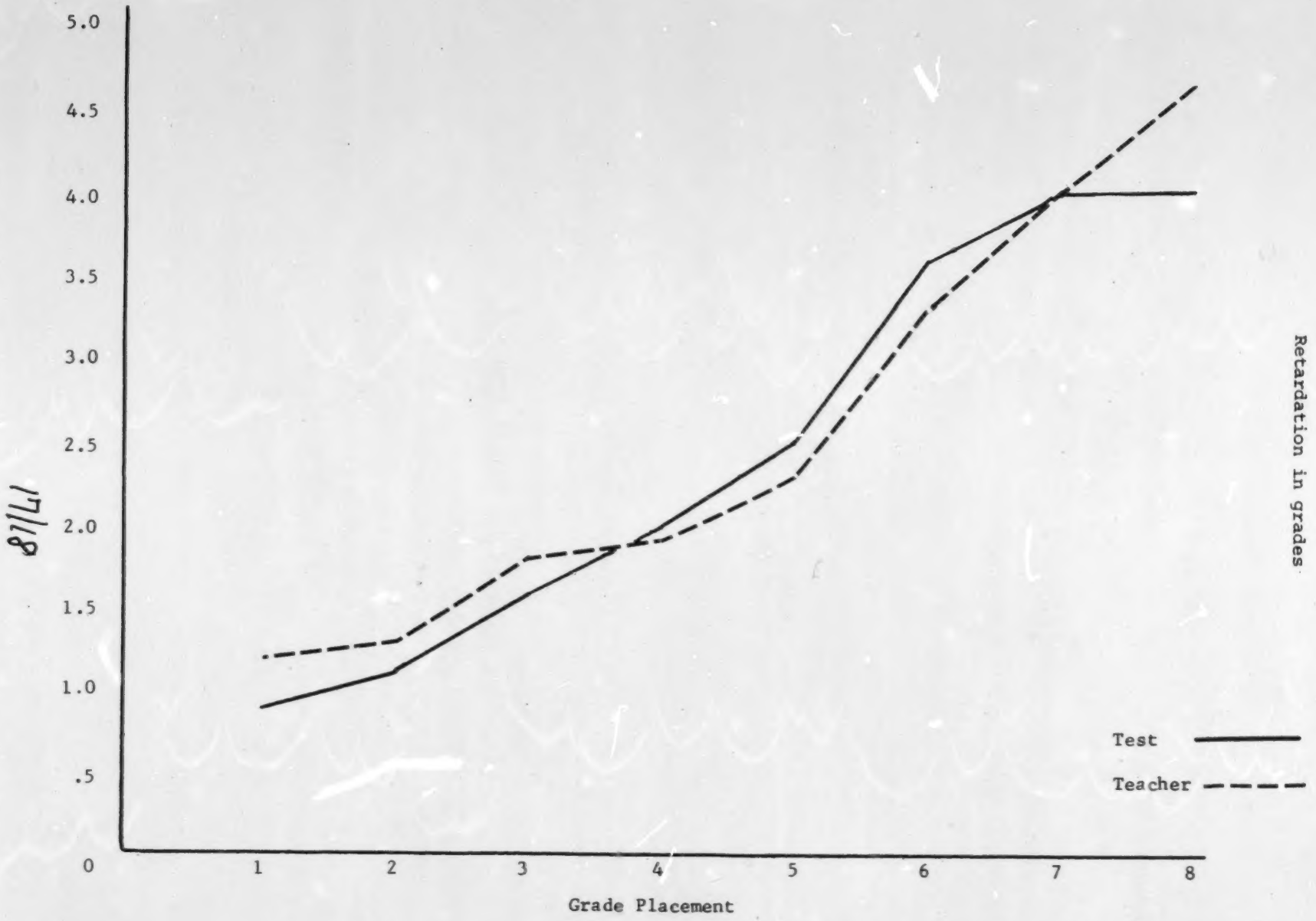

Figure 1 Median reading retardation across states by grades

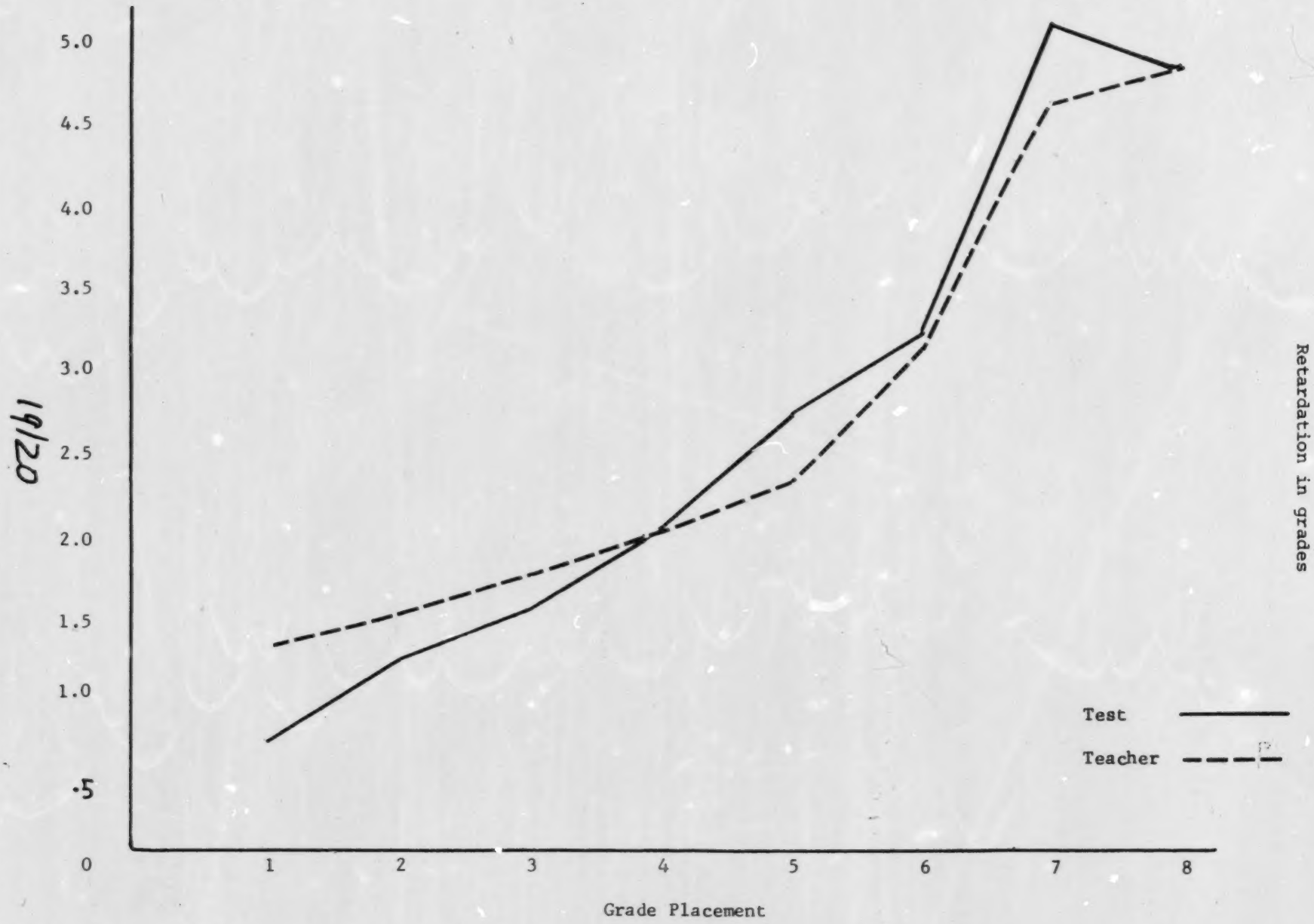

Figure 2 Median spelling retardation across states by grades

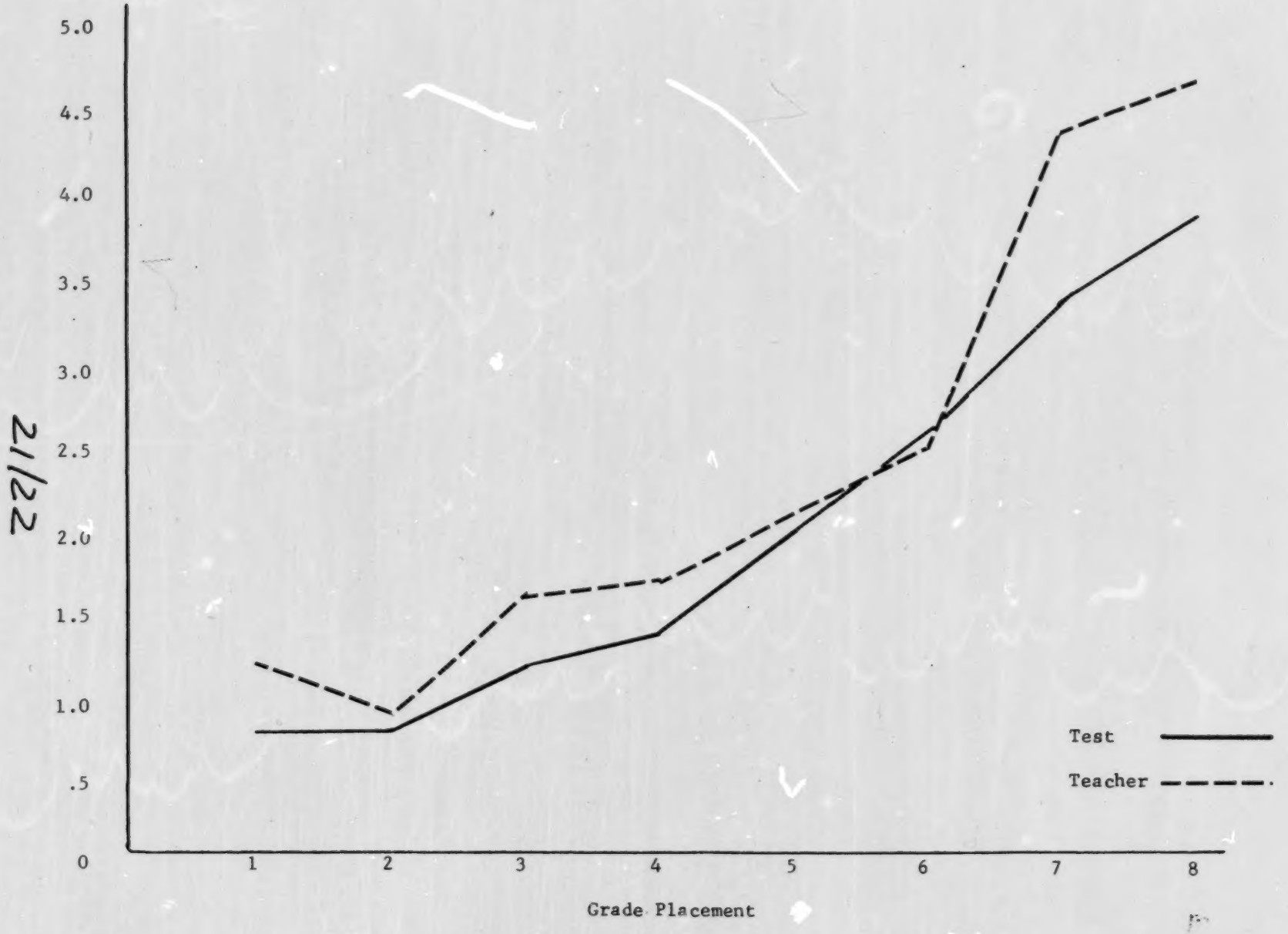

Figure 3 Median arithmetic retardation across states by grades

From these data it appears that most of the states used a variety of models for delivery of services with the so-called resource room the most common.

Other Analyses

An attempt was made to analyze other data but it was found that, because of the large differences among projects, few clear-cut inferences could be made. Among the questions which were examined without obtaining interpretable results were: Was there a difference in remedial emphasis for children with different degrees of disabilities (severe, moderate, mild)? Is retardation in reading, arithmetic, or spelling related to the child's receiving primary assistance in behavior and work habits or academic learning and are there differences in retardation, type of service, etc., by sex?

SUMMARY OF CONCLUSIONS

This investigation attempted to determine the characteristics of children enrolled in the Child Service Demonstration Centers supported by the Bureau of Education for the Handicapped. Data were collected from approximately one-half (21) of the state projects; those which had compatible data. The results of this survey may be summarized as follows:

1. The bulk of the children in the demonstration projects were in the lower elementary grades, with a median chronological age of 8 years 10 months.

2. The distribution of IQ's contained a larger proportion of children of below average ability as compared to an average population.

3. The sex distribution among the states was fairly consistent, with approximately 3 boys to 1 girl receiving services.

4. Of the states reporting prevalence figures, the median percentage of children being served was 4 percent of the population served. For those children rated as having severe disabilities by the teachers, the median prevalence was 2.5 percent.

5. In a separate study of Head Start children consisting of Anglos, Blacks, and Mexican-Americans in which the average deviation of scores on the ITPA was used as a criterion for learning disabilities, it was found that there were twice as many children with learning disabilities among the Head Start group as among the normative population.

6. The majority of children served in the project were children with reading, arithmetic, spelling, and language problems. Those whose problems were primarily in reading comprised 62 percent of the subjects; 29 percent had problems primarily in arithmetic; 24 percent were listed as having primary problems in language; and 23 percent were disabled in spelling. (Since children were sometimes regarded as having more than one problem, they were recorded in more than one category. These percentages reported thus sum to more than one hundred percent).

7. The teachers rated 54 percent of the children served as having severe learning disabilities (defined as children requiring a year or more of remedial instruction). Independent ratings using a discrepancy criterion (difference between achievement and capacity) rated only 25 percent of the children as having severe learning disabilities.

8. As compared to the chronological-age expectancy the children across the states were 1.7 grades retarded in reading, 1.2 grades retarded in arithmetic and 1.8 grades retarded in spelling. This retardation for fourth grade children could be considered moderate rather than severe or mild in degree.

9. As compared to mental-age reading-grade expectancy (MA minus RA) the children were one grade retarded in reading, again indicating a moderate retardation. This interpretation is consistent with the proportion of children rated as moderate in degree of disability by the independent raters.

10. As might be expected, the extent of retardation in reading, arithmetic, and spelling increased in grade placement, showing 1 grade retardation in grades 1 and 2, 2 grades retardation in grade 4, and about 4 grades retardation in grade 8.

11. The resource room is the most commonly used method for the delivery of services. It is followed in frequency by the itinerant teacher and then by the self-contained classroom. Although 9 states used the consultant in mainstreaming, only one state used this method exclusively.

12. Attempts to explore other potential relationships, such as those between (1) type of remedial emphasis and severity of disability, or (2) sex and type of disability, or (3) the role of conduct problems in learning disabilities did not produce consistent patterns.

It should be cautioned that the information contained in this report and the conclusions derived therefrom are considered by the authors as tentative, rather than definitive. This statement is made because of the disparity in data collection found in the various projects. For example, estimates of intelligence and achievement were not based upon the same tests in all projects; there were differences in project organization, in concepts and terminology used by different states. These discrepancies in concepts and terminology may have caused some distortions. A replication of this study in which the same measures are used in all projects and in which more complete data is obtained for each child may produce a more conclusive picture.

DISCUSSION

Many school systems are currently providing ancillary services to school children in addition to the usual classroom instruction. These services include resource rooms, itinerant teachers, and self-contained classes for children who are exceptional: the gifted, the mentally retarded, the visually and auditorially handicapped, the physically handicapped, and the conduct problem child. In addition to these services, there are extensive programs in speech correction, remedial and corrective reading, and compensatory education. Superimposed on this structure is the program for learning disabled children under state and Federal auspices. Many have asked how services for learning disabled children are differentiated from programs in speech correction, reading and language arts, or from the programs for the mentally retarded and the emotionally disturbed. Are learning disability programs unique or do they duplicate part of the present programs of ancillary services of the school? Are learning disabled children different in kind or degree or both?

The Federal definition of specific learning disabilities indicates that this group "have a disorder.....in basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations...."

It is obvious from the data presented in this report that most state projects have selected reading, spelling, and arithmetic as the areas that are considered the major focus for remediation under the learning disability program. It would appear from the data that the majority of children in the projects, although underachieving to some degree, would not qualify as specific learning disabled children, since (a) many of the children were retarded equally in reading, spelling, and arithmetic and were therefore not specific but general in academic retardation, and (b) a substantial proportion were minor or moderate in their degree of underachievement.

One can raise the question of whether underachievement in reading, spelling, and/or arithmetic regardless of degree or circumstances can be considered a specific learning disability and come under the Federal appropriation and intent of the Learning Disabilities Act of 1969. There are many circumstances that result in underachievement in school children, among which are (a) disadvantaged environments, (b) lack of motivation, (c) inadequate instruction, (d) lack of school opportunities, and (e) deviations in learning ability such as are found in mentally retarded and slow learning children. Underachievement is also found in sensorially handicapped children, i.e., the deaf, blind, cerebral palsied, etc.

There is sufficient information in the report to indicate that the Child Service Demonstration Centers are dealing with underachieving (not specific learning disabilities) children in a substantial portion of children served. A smaller proportion of the children were listed as children needing visual and auditory process training. A substantial proportion are equally underachieving in reading, spelling, and arithmetic,

which could be explained by the circumstances quoted earlier of lack of school opportunity, below average in intelligence, poor teaching, etc.

The data from this report shows that a substantial number of children in the projects were equally underachieving in all academic subjects and tested below IQ of 90. Previously, many of these children would have been classified as slow learners or as mentally retarded. Since the AAMD has changed their criterion of mental retardation from one standard deviation below normal, or an IQ of 84 and below to two standard deviations or an IQ of 68 and below, it would appear that many of these slow learning children are now being classified as learning disabled. Admittedly these children need help, but the help should be an adapted curriculum for all areas of education. This fact was reflected in some reports in which teachers could not check just one primary area of remediation but checked reading, writing, spelling, and arithmetic all as receiving primary emphases. In some projects it was obvious that they were not dealing with specific learning disabilities---but rather with a general learning problem in a number of subjects as is generally found with (a) slow learning children, or (b) children from disadvantaged environments. Admittedly, these children--slow learners, disadvantaged children, and others--need attention from compensatory programs under Title III or Title I, but one can raise the question of whether these children require the same kind of emphasis as children with specific learning disabilities, especially those who exhibit psychological deviations which manifest themselves in disorders of reading, etc. when the child is quite capable in other areas. Children who are underachieving in school because of low general learning ability, lack of school opportunity, poor instruction, poor attendance, poor motivation, and for many other reasons require good school opportunity and good teaching. General educational techniques of instruction when adequately applied are suitable for them. Schools should be organized to provide maximum opportunities for all children in the regular grades.

Handicapped children and children with specific learning disabilities require "special education" defined as practices that are unique, uncommon, of unusual quality, and in particular are in addition to the organization and instructional procedures used with the majority of children.

The present trend to include underachieving children that do not require special education, but good regular education may be neglecting the difficult and hard-core specific learning disability children.

Appendix A

LEADERSHIP TRAINING INSTITUTE IN LEARNING DISABILITIES
Department of Special Education
College of Education
University of Arizona

DATE_____

NAME OF STATE_____ NAME OF SCHOOL_____ CHILD'S NAME OR CODE NUMBER_____ SEX___

REMEDIAL AREAS (mark a 1 for major emphasis
a 2 for minor emphasis)

_____Reading Skills
_____Writing
_____Arithmetic
_____Spelling
_____Language
_____Behavior
_____Auditory Processing
_____Visual Processing
_____Haptic Processing
_____Visual-Motor Processing
_____Work Habits
_____Other (please specify_____)

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L.D. REMEDIATION SETTING (please check one)

_____Resource Room
_____Itinerant Teacher
_____Self-Contained Classroom
_____Main-streaming (consultants)

CHILD'S PRESENT AGE IN MONTHS AT BEGINNING OF REMEDIATION_____

CHILD'S PRESENT MENTAL AGE IN MONTHS_____ ON _____ TEST

CHILD'S IQ_____ ON _____ TEST

CHILD'S PRESENT GRADE PLACEMENT_____

ACHIEVEMENT GRADE LEVEL (at beginning of remediation)

ON TESTS	YOUR RATING
Reading_____	_____
Arithmetic_____	_____
Spelling_____	_____
Language_____	_____

DEGREE OF DISABILITY

_____Mild
_____Moderate
_____Severe

NOTE TO TEACHER:

Under Remedial Areas write a 1 in the blank for the major remedial emphasis the child is receiving, and a 2 for any secondary remedial work.

Under Achievement Grade Level give the results of pre remediation achievement tests. Also, give your rating of the grade level in ½ grades, (i.e., 1.5, 2.0, 2.5, 3.0, etc.).

Under Degree of Disability check mild for the child who is only slightly disabled and who will not require much remediation; check moderate for the child who is more disabled but who will very likely require a short period (6 months) of training; check severe for the child who is very disabled and who will require a year to three years of individualized remediation.

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Appendix B

Tables 1B to 9B include data for each of the 21 states for age, IQ, sex, teacher ratings, independent ratings, settings, and for reading, arithmetic, and spelling grades.

1) Age Distribution

2) IQ Distribution

3) Sex Distribution

4) Teacher Ratings Percent

5) Percentage of children rated as severe, moderate, and mild learning disabilities by teachers and 2 raters for 7 states

6) Setting

7) Reading Grade

8) Arithmetic Grade

9) Spelling Grade

Table 1B

Age Distribution

State Code	Mean C.A. in months	S.D. in months	Range
2	93.3	10.6	75-120
3	135	31.3	74-179
4	110.9	17.1	73-145
7	102.7	21.8	65-180
10	108.4	20.3	57-155
13	150.2	6.7	136-172
14	92.3	10.2	76-116
16	103.8	3.7	83-171
21	107.9	23.4	68-180
23	105.8	25.5	50-161
24	85.8	2.2	77-136
26	117.7	26.5	65-180
27a	92.6	24.5	58-156
27b	108.8	35.2	49-192
27c	132.9	24.7	72-174
27d	93.8	19.8	65-151
28	103.5	3.7	61-155
30	161.4	18.0	130-197
36	106.2	14.9	70-143
38	182	3.9	170-190
40	96.6	13.7	70-123
41	126.8	5.6	59-200
42	95.3	13.6	71-122
43	106.2	23.5	62-177

Median=106.2

CA=8-10

High=182

Low=85.8

Table 2B

IQ Distribution

State Code	N	Mean IQ	S.D.	Range	69 & Below	70-79	80-89
2	67	96.8	9.9	79-124		1.5%	23.9%
3	49	92.4	11.5	67-118	2%	8%	29%
4	57	100.4	11.7	77-131		3.5%	15.8%
7	271	93.8	13.1	48-137	3.3%	8.5%	25.8%
10	245	89.8	12.3	59-136	1.2%	19.2%	32.3%
13	33	96.4	11.0	77-126		6.1%	18.1%
14	25	105.3	12.2	86-129			8%
16	28	92.2	10.0	75-117		4%	42%
21	57	91.1	11.5	69-123	1.8%	15.7%	28.1%
23	83	93.1	12.9	71-125		15.7%	26.5%
24	147	88.6	10.3	70-123		12.9%	47.6%
26	208	92.4	13.2	61-138	4.3%	8.7%	29.8%
27a	78	90.7	12.0	64-124	3.8%	6.5%	39.7%
27b	23	82.7	12.3	66-112	17.4%	26.1%	26.1%
27c	281	91.4	14.2	68-130	1.7%	20%	29.3%
27d	230	100.0	12.0	70-134		3.5%	16.5%
28	31	101.0	12.2	79-127		3%	13%
30	51	95.0	11.1	81-128			41.2%
36	276	97.4	11.0	72-145		2.2%	18.5%
38	103	93.7	8.5	75-115		5.8%	24.3%
40	15	91.6	9.4	74-101		20%	13%
41	170	93.2	12.3	64-140	1.2%	8.2%	25.9%
42	63	88.7	11.1	63-114	4.8%	12.7%	39.1%
43	181	93.8	11.9	64-123	3%	10%	20%
Median		93.1			3	8	26
High		105.3			17.4	26.1	47.6
Low		82.7			1.2	1.5	8

Table 3B

Sex Distribution

State Code	Boys		Girls	
	N	%	N	%
2	46	70	20	30
3	38	76	12	24
4	51	86.4	8	13.6
7	232	74	81	26
10	196	79.7	50	20.3
13	28	77.8	8	22.2
14	18	72	7	28
16	22	76	7	24
21	44	78.6	12	21.4
23	55	64	31	36
24	114	77.6	33	22.4
26	189	74.1	66	25.9
27a	72	68.6	33	31.4
27b	20	83	4	17
27c	70	76	22	24
27d	206	71	83	29
28	23	74	8	26
30	40	75.5	13	24.5
36	212	75.7	68	24.3
38	68	66	35	34
40	22	73.3	8	26.7
41	150	83	30	17
42	45	70	19	30
43	128	69	57	31

Table 4B

Teacher Ratings (%)

State Code	Severe	Moderate	Mild
2	30	43	27
3	56	35	8
4	76	17	7
7	53	35	12
10	65	35	0
13	51	40	9
14	60	32	8
16	55	21	24
21	67	23	11
23	57	29	12
24	65	20	15
26	46	38	16
27a	84	12	4
27b	59	23	18
27c	26	47	27
27d	42	44	14
28	39	39	23
30	65	31	4
36	32	44	24
38	13	56	31
40	41	48	11
41	34	46	20
42	72	25	4
43	22	44	34
Median	54	35	13
High	84	56	34
Low	13	12	0

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Table 5B

Percentage of children rated as severe, moderate, and mild learning disabilities by teachers and 2 raters for 7 states

State	Teacher			Rater 1				Rater 2			
	Severe	Moderate	Mild	Severe	Moderate	Mild	Not	Severe	Moderate	Mild	Not
13	51	40	9	36	36	25	3	25	36	31	8
14	60	32	8	16	36	28	20	16	28	40	16
21	67	23	11	39	32	9	21	28	33	28	11
23	57	29	12	11	20	29	39	6	21	42	30
26	46	38	16	23	36	25	17	27	36	29	8
30	65	31	4	51	28	10	12	41	47	10	2
36	32	44	24	20	39	29	12	20	43	32	4

Table 6B

Setting

State Code	Resource Room		Itinerant		Self-contained		Mainstreaming	
	N	%	N	%	N	%	N	%
2	62	100						
3	47	98					1	2
4	49	85	9	15				
7	240	78	9	3	22	7	35	11
10	247	100						
13	36	100						
14							25	100
16	22	79	6	21				
21	44	77			13	23		
23	45	54	39	46				
24	42	29	1	7	99	68	3	2
26	74	29	178	70	1	0		
27a			13	13	91	88		
27b					20	95	1	5
27c			53	58	1	1	37	41
27d			257	89	31	11		
28	31	100						
30					53	100		
36	276	100						
38	73	73	4	4	23	23		
40	1	4	7	28	16	64	1	4
41	1	1			23	14	137	85
42	64	100						
43	12	7					173	94

Table 7B

Reading Grade

State Code	N	Grade	C.A.	Rdg. Gr. Expec	Discrepanc
2	67	2.0	7-9	2.8	.8
3	48	3.4	11-3	6.2	2.8
4	53	3.1	9-3	4.2	1.1
7	297	2.1	8-7	3.6	1.5
10	242	1.8	9-0	4.0	2.2
13	33	4.4	12-6	7.5	3.1
14	23	1.8	7-8	2.7	.9
16	28	1.4	8-8	3.7	2.3
21	56	1.7	9-0	4.0	2.3
23	74	2.8	8-10	3.8	1.0
24	127	1.6	7-2	2.2	.6
26	251	2.7	9-10	4.8	2.1
27a	40	1.8	7-9	2.8	1.0
27b	13	2.8	9-1	4.1	1.3
27c	27	3.7	11-1	6.1	2.4
27d	172	1.7	7-9	2.8	1.1
28	31	1.9	8-8	3.7	1.8
30	49	4.5	12-6	7.5	3.0
36	280	2.1	8-10	3.8	1.7
38	90	6.3	15-2	10.2	3.9
40	13	1.4	8-1	3.1	1.7
41	152	3.2	10-7	5.6	2.4
42	62	1.6	7-11	2.9	1.3
43	167	2.9	8-10	3.8	.9

Table 8B

Arithmetic Grade

State Code	N	Grade	C.A.	Expectancy	Discrepancy
2	65	2.4	7-9	2.8	.4
3	40	3.5	11-3	6.2	2.7
4	53	3.0	9-3	4.2	1.2
7	300	2.4	8-7	3.6	1.2
10	241	2.3	9-0	4.0	1.7
13	34	4.9	12-6	7.5	2.6
14	24	1.9	7-8	2.7	.8
16	26	1.9	8-8	3.7	1.8
21	56	2.2	9-0	4.0	1.8
23	75	2.7	8-10	3.8	1.1
24	133	2.1	7-2	2.2	.1
26	251	2.7	9-10	4.8	2.1
27a	37	1.7	7-9	2.8	1.1
27b	13	3.0	9-1	4.1	1.1
27c	21	3.8	11-1	6.1	2.3
27d	158	1.9	7-10	2.8	.9
28	30	2.5	8-8	3.7	1.2
30	52	4.7	12-6	7.5	2.8
36	254	2.7	8-10	3.8	1.1
38	103	6.3	15-2	10.2	3.9
40	13	1.7	8-1	3.1	1.4
41	104	2.8	10-7	5.6	2.8
42	61	1.8	7-11	2.9	1.1
43	169	3.0	8-10	3.8	.8

Table 9B

Spelling Grade

State Code	N	Grade	C.A.	Expectancy	Discrepancy
2	66	2.0	7-9	2.8	.8
3	10	2.5	11-3	6.2	3.7
4	52	2.9	9-3	4.2	1.3
7	296	1.9	8-7	3.6	1.7
10	239	1.9	9-0	4.0	2.1
13	33	4.7	12-6	7.5	2.8
14	23	1.6	7-8	2.7	1.1
16	22	1.4	8-8	3.7	2.3
21	56	1.7	9-0	4.0	2.3
23	79	2.8	8-10	3.8	1.0
24	120	1.6	7-2	2.2	.6
26	252	2.4	9-10	4.8	2.4
27a	34	1.8	7-9	2.8	1.0
27b	11	1.7	9-1	4.1	2.3
27c	14	2.9	11-1	6.1	3.2
27d	133	1.7	7-10	2.8	1.1
28	23	2.2	8-8	3.7	1.5
30	53	4.4	12-6	7.5	3.1
36	280	2.0	8-10	3.8	1.8
38	89	6.7	15-2	10.2	3.5
40	7	1.3	8-1	3.1	1.8
41	109	2.4	10-7	5.6	3.2
42	63	1.7	7-11	2.9	1.2
43	169	2.8	8-10	3.8	1.0

Appendix C

Tables 1C to 21C present an analysis of age, intelligence, achievement and academic retardation by grade placement levels for each state. This data has been summarized in Table 1C by grade placement level. For each variable the mean value and the number of cases for whom the data was available is given. The variables presented are:

1) Chronological Age in months

2) Mental Age in months

3) IQ

4) Reading grade as assessed by standardized tests

5) Arithmetic grade as assessed by standardized tests

6) Spelling grade as assessed by standardized tests

7) Teachers' estimates of reading grade

8) Teachers' estimates of arithmetic grade

9) Teachers' estimates of spelling grade

For each of variable 4 to 9, the academic retardation was computed relative to the average chronological age of children within each grade.

Table 1C

Retardation in Reading, Arithmetic, and Spelling
Based on Age Expectancy

	Grades 1		2		3		4		5		6		7		8	
	(N)	Ret'd	(N)	Ret'd	(N)	Ret'd	(N)	Ret'd	(N)	Ret'd	(N)	Ret'd	(N)	Ret'd	(N)	Ret'd
Reading Test	(16)	1.0	(45)	1.0	(43)	1.1	(45)	2.3	(37)	2.4	(28)	3.0	(17)	4.0	(15)	4.2
Teacher	(16)	1.2	(46)	1.0	(43)	1.3	(45)	2.3	(35)	2.5	(28)	2.9	(11)	4.6	(6)	5.7
Arithmetic Test	(16)	1.1	(45)	.8	(43)	1.0	(45)	1.9	(37)	2.5	(28)	3.1	(17)	4.6	(15)	5.5
Teacher	(16)	1.2	(46)	.8	(43)	1.0	(45)	1.8	(35)	2.4	(28)	3.3	(11)	5.0	(6)	5.8
Spelling Test	(16)	1.2	(45)	1.2	(43)	1.4	(45)	2.5	(37)	3.0	(28)	3.4	(17)	4.6	(15)	5.2
Teacher	(16)	1.3	(46)	1.2	(43)	1.4	(45)	2.5	(35)	2.9	(28)	3.5	(11)	5.2	(6)	6.3

Table 3C

Age, intelligence, achievement, and retardation by grade

State 2

Variable	Grades 1	2	3
Chronological Age			
Mean	83.8	91.9	103.7
N	16	13	19
Mental Age			
Mean	76.0	91.7	98.8
N	4	9	12
IQ			
Mean	91.4	98.2	94.9
N	16	13	19
Reading			
Mean	1.2	1.9	2.6
N	16	13	19
Retardation	.8	.8	1.1
Arithmetic			
Mean	1.5	2.2	3.4
N	14	13	19
Retardation	.5	.5	.3
Spelling			
Mean	1.3	1.8	2.7
N	15	13	19
Retardation	.7	.9	1.0
Reading (Teacher)			
Mean	1.0	1.6	2.2
N	12	13	19
Retardation	1.0	1.1	1.5
Arithmetic (Teacher)			
Mean		1.9	3.0
N		13	19
Retardation		.8	.7
Spelling (Teacher)			
Mean		1.5	2.2
N		13	19
Retardation		1.2	1.5

Table 3C

Age, intelligence, achievement, and retardation by grade

State 3

Variable	Grades 1	2	3	4	5	6	7	8
Chronological Age								
Mean	82.7	95.0	106.4	111.0	124.2	146.4	156.5	168.9
N	3	6	8	1	5	5	4	16
Mental Age								
Mean	80.0	95.8	104.8	127.0	117.6	123.4	128.0	148.7
N	3	6	8	1	5	5	4	16
IQ								
Mean	97.0	100.3	97.8	113.0	92.8	81.8	83.0	89.7
N	3	6	8	1	5	5	4	16
Reading								
Mean	1.0	1.9	2.3	2.5	4.1	5.1	2.4	4.3
N	3	6	8	1	5	5	4	15
Retardation	.9	1.0	1.5	1.7	1.2	1.1	5.7	4.8
Arithmetic								
Mean	1.4	2.3	2.0	3.6	3.3	4.0	3.0	5.1
N	2	4	7	1	5	4	3	13
Retardation	.5	.6	1.8	.6	2.0	2.2	5.1	4.0
Spelling								
Mean	1.2	1.6	2.3			2.5	2.6	4.8
N	2	2	2			1	1	2
Retardation	.7	1.3	1.5			3.7	5.5	4.3
Reading (Teacher)								
Mean	1.0	1.6	2.1	2.5	4.0	4.0	2.4	3.8
N	1	6	8	1	4	5	4	16
Retardation	.9	1.3	1.7	1.7	1.3	2.2	5.7	5.3
Arithmetic (Teacher)								
Mean	1.3	2.1	2.1	3.5	3.2	4.0	3.0	4.8
N	2	4	7	1	3	4	3	11
Retardation	.6	.8	1.6	.7	2.1	2.2	5.1	4.3
Spelling (Teacher)								
Mean	1.0	1.5	2.3				2.5	4.0
N	2	2	2				1	1
Retardation	.9	1.4	1.5				5.6	5.1

Table 4C

Age, intelligence, achievement, and retardation by grade

State 4

Variable	Grades 2	3	4	5
Chronological Age				
Mean	95.0	102.3	118.5	130.0
N	4	3	13	7
Mental Age				
Mean	88.3	101.0	97.0	111.0
N	3	2	3	1
IQ				
Mean	100.5	103.3	95.5	97.3
N	4	3	13	7
Reading				
Mean	1.3	2.5	3.1	3.6
N	4	3	13	7
Retardation	1.5	1.0	1.8	2.2
Arithmetic				
Mean	2.0	2.3	3.5	3.5
N	4	3	13	7
Retardation	.9	1.2	1.4	2.3
Spelling				
Mean	1.5	1.7	3.0	3.3
N	4	3	13	7
Retardation	1.4	1.8	1.9	2.5

Table 5C

Age, intelligence, achievement, and retardation by grade

State 7

Variable	Grades 1	2	3	4	5	6	7
Chronological Age							
Mean	83.3	93.5	107.6	121.7	135.8	146.4	156.0
N	41	31	42	23	10	8	3
Mental Age							
Mean	73.3	84.6	93.2	102.3	108.7	122.9	138.7
N	42	31	40	21	7	9	3
IQ							
Mean	87.6	94.8	92.2	90.7	86.1	89.6	95.3
N	36	23	31	17	7	9	3
Reading							
Mean	1.0	1.7	2.2	2.3	2.9	3.2	3.5
N	39	31	42	23	9	8	3
Retardation	.9	1.1	1.8	2.9	3.4	3.0	4.5
Arithmetic							
Mean	1.2	2.0	2.6	3.1	3.9	4.4	4.6
N	40	31	42	23	9	8	3
Retardation	.7	.8	1.4	2.1	2.4	1.8	3.4
Spelling							
Mean	1.2	1.6	2.1	2.0	2.9	3.0	2.9
N	40	29	42	23	9	8	3
Retardation	.7	1.2	1.9	3.2	3.4	3.2	5.1
Reading (Teacher)							
Mean	.6	1.2	1.6	1.9	2.6	3.3	1.0
N	36	28	39	21	9	8	1
Retardation	1.3	1.6	2.4	3.3	3.7	2.9	7.0
Arithmetic (Teacher)							
Mean	.7	1.6	2.3	3.1	3.8	4.2	3.0
N	36	28	38	21	9	8	1
Retardation	1.2	1.2	1.7	2.1	2.5	2.0	5.0
Spelling (Teacher)							
Mean	.6	1.2	1.5	1.9	2.6	3.1	1.0
N	37	26	38	20	9	8	1
Retardation	1.3	1.6	2.5	3.3	3.7	3.1	7.0

Table 6C

Age, intelligence, achievement, and retardation by grade

State 10

Variable	Grades 1	2	3	4	5	6
Chronological Age						
Mean	82.9	93.6	106.4	118.7	130.7	141.7
N	9	36	42	29	31	9
Mental Age						
Mean	73.3	85.5	97.3	109.8	116.4	128.3
N	9	36	42	29	30	9
IQ						
Mean	89.0	90.7	91.0	91.2	87.6	90.6
N	9	36	42	29	30	9
Reading						
Mean	.6	1.2	1.8	1.9	2.5	3.5
N	9	36	42	29	32	9
Retardation	1.3	1.6	2.0	3.0	3.4	3.3
Arithmetic						
Mean	.7	1.5	2.3	2.8	3.4	4.6
N	9	36	42	29	31	9
Retardation	1.2	1.3	1.5	2.1	2.5	2.2
Spelling						
Mean	.9	1.2	1.8	2.1	2.7	3.6
N	7	36	42	28	32	9
Retardation	1.0	1.6	2.0	2.8	3.2	3.2
Reading (Teacher)						
Mean	.8	1.0	1.6	1.9	2.4	3.1
N	8	34	40	25	29	9
Retardation	1.1	1.8	2.2	3.0	3.5	3.7
Arithmetic (Teacher)						
Mean	.8	1.5	2.3	2.9	3.2	4.2
N	7	33	40	25	29	9
Retardation	1.1	1.3	1.5	2.0	2.7	2.6
Spelling (Teahcer)						
Mean	.7	1.0	1.6	1.9	2.2	3.3
N	7	33	40	25	28	9
Retardation	1.2	1.8	2.2	3.0	3.7	3.5

Table 7C

Age, intelligence, achievement, and retardation by grade

State 13

Variable	Grades 6	7
Chronological Age		
Mean	144.7	157.1
N	20	16
Mental Age		
Mean	132.7	156.4
N	19	14
IQ		
Mean	93.5	100.4
N	19	14
Reading		
Mean	4.1	4.9
N	19	14
Retardation	3.0	3.2
Arithmetic		
Mean	4.7	5.3
N	19	15
Retardation	2.4	2.8
Spelling		
Mean	4.7	4.8
N	19	14
Retardation	2.4	3.3
Reading (Teacher)		
Mean	4.3	4.8
N	19	16
Retardation	2.8	3.3
Arithmetic (Teacher)		
Mean	4.6	5.1
N	19	16
Retardation	2.5	3.0
Spelling (Teacher)		
Mean	4.5	4.6
N	19	16
Retardation	2.6	3.5

Table 8C

Age, intelligence, achievement, and retardation by grade

State 14

Variable	Grade 1	Grade 2	Grade 3
Chronological Age			
Mean	83.9	93.3	108.3
N	9	10	4
Mental Age			
Mean	91.9	98.8	102.5
N	8	10	4
IQ			
Mean	108.2	106.5	95.0
N	9	12	4
Reading			
Mean	1.2	1.9	2.9
N	8	12	3
Retardation	.8	.9	1.1
Arithmetic			
Mean	1.4	2.0	2.7
N	8	12	4
Retardation	.6	.8	1.3
Spelling			
Mean	.9	1.9	2.5
N	8	11	4
Retardation	1.1	.9	1.5
Reading (Teacher)			
Mean	.6	1.4	2.2
N	3	6	3
Retardation	1.4	1.4	1.8
Arithmetic (Teacher)			
Mean	.7	1.9	2.1
N	4	3	3
Retardation	1.3	.9	1.9
Spelling (Teacher)			
Mean	.7	1.9	2.1
N	4	3	3
Retardation	1.3	1.4	1.9

Table 9C

Age, intelligence, achievement, and retardation by grade

State 16

Variable	Grades 1	2	3
Chronological Age			
Mean	93.5	96.5	112.0
N	2	13	14
Mental Age			
Mean	78.5	88.3	87.4
N	2	13	14
IQ			
Mean	87.5	95.2	90.0
N	2	13	13
Reading			
Mean	1.2	1.3	1.5
N	2	12	14
Retardation	1.6	1.8	2.8
Arithmetic			
Mean	1.7	1.9	2.0
N	1	11	14
Retardation	1.1	1.2	2.3
Spelling			
Mean	1.6	1.3	1.5
N	1	11	10
Retardation	1.2	1.8	2.8
Reading (Teacher)			
Mean	1.1		1.8
N	2		14
Retardation	1.7		2.5
Arithmetic (Teacher)			
Mean	1.1	1.9	2.2
N	2	13	14
Retardation	1.7	2.2	2.1
Spelling (Teacher)			
Mean	1.0	1.4	1.9
N	1	13	13
Retardation	1.8	1.7	2.4

Table 10C

Age, intelligence, achievement, and retardation by grade

State 21

Variable	Grades 1	2	3	4	5	6
Chronological Age						
Mean	72.5	89.8	92.8	100.2	120.7	132.4
N	4	6	11	9	13	13
Mental Age						
Mean						
N						
IQ						
Mean	90.0	93.2	92.4	86.7	97.3	85.8
N	4	6	11	9	13	13
Reading						
Mean	1.0	1.0	1.1	1.8	2.3	2.1
N	4	6	11	8	13	13
Retardation	.1	1.5	1.7	1.5	2.8	3.9
Arithmetic						
Mean	.5	1.2	2.1	1.9	3.0	3.1
N	4	6	11	8	13	13
Retardation	.6	1.3	.7	1.4	2.1	2.9
Spelling						
Mean	.3	.9	1.4	1.8	2.2	2.3
N	4	6	11	8	13	13
Retardation	.8	1.4	1.4	1.5	2.9	3.7
Reading (Teacher)						
Mean	.5	1.5	1.7	2.3	3.4	3.3
N	4	6	11	9	13	13
Retardation	.6	1.0	1.1	1.0	1.7	3.0
Arithmetic (Teahcer)						
Mean	.7	1.7	2.2	3.2	4.1	3.6
N	4	6	11	9	13	13
Retardation	.4	.8	.6	.1	1.0	2.5
Spelling (Teacher)						
Mean			2.0	2.4	3.6	2.9
N			9	8	13	13
Retardation			.8	.9	1.5	3.1

Table 11C

Age, intelligence, achievement, and retardation by grade

State 23

Variable	Grades 0	1	2	3	4	5
Chronological Age						
Mean	67.0	81.4	90.0	109.6	120.4	129.2
N	9	13	10	12	10	18
Mental Age						
Mean	56.7	81.0	88.8	101.7	100.8	129.0
N	9	9	9	10	6	13
IQ						
Mean	90.2	93.9	96.2	97.8	87.6	93.6
N	9	14	10	13	10	18
Reading						
Mean	.5	1.3	2.2	2.8	3.0	4.0
N	5	9	10	13	10	19
Retardation	.1	.5	.3	1.4	2.0	1.8
Arithmetic						
Mean	.6	.9	2.0	3.0	2.9	4.3
N	3	13	10	13	10	19
Retardation	0	.9	.5	1.2	2.1	1.5
Spelling						
Mean	.4	1.4	2.0	3.0	3.4	4.4
N	5	13	10	13	10	19
Retardation	.2	.4	.5	1.2	1.6	1.4
Reading (Teacher)						
Mean	.4	1.1	1.9	2.6	3.1	4.2
N	3	8	9	11	7	14
Retardation	.2	.7	.6	1.6	1.9	1.6
Arithmetic (Teacher)						
Mean	.3	1.4	1.9	3.1	2.9	4.6
N	3	9	9	11	7	14
Retardation	.3	.4	.6	1.1	2.1	1.2
Spelling (Teahcer)						
Mean	.3	1.3	1.9	2.6	3.5	4.3
N	3	8	9	11	7	14
Retardation	.3	.5	.6	1.6	1.5	1.5

Table 12C

Age, intelligence, achievement, and retardation by grade

State 24

Variable	Grades 1	2	3	4	5
Chronological Age					
Mean	74.3	90.4	98.8	108.0	116.5
N	4	10	8	8	4
Mental Age					
Mean	75.7	80.5	93.0	102.2	126.7
N	3	8	6	9	3
IQ					
Mean	85.5	91.0	93.6	86.6	88.8
N	4	10	10	18	12
Reading					
Mean	.3	1.2	1.3	1.9	2.1
N	2	4	7	17	10
Retardation	.9	1.3	1.9	2.1	2.7
Arithmetic					
Mean	.4	1.3	1.7	2.4	2.9
N	2	4	8	17	12
Retardation	.8	1.2	1.5	1.6	1.9
Spelling					
Mean	.8	1.4	1.3	1.8	2.1
N	2	4	8	15	12
Retardation	.4	1.1	1.9	2.2	2.7
Reading (Teacher)					
Mean	.8	2.2	1.7	2.6	3.0
N	3	7	8	17	12
Retardation	.4	.3	1.5	1.4	1.8
Arithmetic (Teacher)					
Mean	.3	1.7	1.7	2.5	3.2
N	3	7	8	17	12
Retardation	.9	.8	1.5	1.5	1.6
Spelling (Teacher)					
Mean	.4	1.1	1.8	2.4	2.9
N	2	7	8	16	12
Retardation	.8	1.4	1.4	1.6	1.9

Table 13C

Age, intelligence, achievement, and retardation by grade

State 26

Variable	Grades 1	2	3	4	5	6	7	8	9
Chronological Age									
Mean	82.7	89.8	101.7	117.1	131.6	142.0	157.4	166.4	174.5
N	15	45	43	45	37	28	17	15	2
Mental Age									
Mean									
IQ									
Mean	84.5	94.9	97.1	95.5	90.0	88.9	89.4	89.0	82.0
N	10	37	35	35	30	26	16	15	2
Reading									
Mean	.9	1.5	2.3	2.5	3.6	3.8	4.1	4.6	
N	16	45	43	45	37	28	17	15	
Retardation	1.0	1.0	1.1	2.3	2.4	3.0	4.0	4.2	
Arithmetic									
Mean	.8	1.7	2.4	2.9	3.5	3.7	3.5	3.3	
N	16	45	43	45	37	28	17	15	
Retardation	1.1	.8	1.0	1.9	2.5	3.1	4.6	5.5	
Spelling									
Mean	.7	1.3	2.0	2.3	3.0	3.4	3.5	3.6	
N	16	45	43	45	37	28	17	15	
Retardation	1.2	1.2	1.4	2.5	3.0	3.4	4.6	5.2	
Reading (Teacher)									
Mean	.7	1.5	2.1	2.5	3.5	3.9	3.5	3.1	5.2
N	16	46	43	45	35	28	11	6	2
Retardation	1.2	1.0	1.3	2.3	2.5	2.9	4.6	5.7	4.7
Arithmetic (Teacher)									
Mean	.7	1.7	2.4	3.0	3.6	3.5	3.1	3.0	3.4
N	16	46	43	45	35	28	11	6	2
Retardation	1.2	.8	1.0	1.8	2.4	3.3	5.0	5.8	6.5
Spelling (Teahcer)									
Mean	.6	1.3	2.0	2.3	3.1	3.3	2.9	2.5	2.5
N	16	46	43	45	35	28	11	6	6
Retardation	1.3	1.2	1.4	2.5	2.9	3.5	5.2	6.3	7.4

Table 14C

Age, intelligence, achievement, and retardation by grade

State 28

Variable	Grades 1	2	3	4	5	6
Chronological Age						
Mean	75.0	94.3	99.6	116.4	122.5	141.5
N	7	4	5	11	2	2
Mental Age						
Mean						
N						
IQ						
Mean	102.9	115.8	100.8	96.9	98.5	91.0
N	7	4	5	11	2	2
Reading						
Mean	.6	2.0	1.9	2.3	3.9	2.5
N	7	4	5	11	2	2
Retardation	.6	.8	1.4	2.4	1.3	4.3
Arithmetic						
Mean	.9	2.0	2.7	3.3	4.3	3.1
N	7	3	5	11	3	2
Retardation	.3	.8	.6	1.4	.9	3.7
Spelling						
Mean	1.0	1.8	2.0	2.3	4.6	4.2
N	6	2	4	8	2	2
Retardation	.2	1.0	1.3	2.4	.6	2.6
Reading (Teacher)						
Mean	1.0	2.3	2.7	3.1	4.9	3.9
N	7	4	5	11	2	2
Retardation	.2	.5	.6	1.6	.3	2.9
Arithmetic (Teacher)						
Mean		2.7		3.5	4.2	4.1
N		4		11	2	2
Retardation		.1		1.2	1.0	2.7
Spelling (Teacher)						
Mean		1.9	2.4	3.1	4.9	3.8
N		4	4	10	2	2
Retardation		.9	.9	1.6	.3	3.0

Table 15C

Age, intelligence, achievement, and retardation by grade

State 30

Variable	Grades 6	7	8	9	10	11	12
Chronological Age							
Mean	152.0	152.4	156.3	165.3	189.5	202.5	216.0
N	3	19	9	6	11	2	1
Mental Age							
Mean	129.0	147.8	144.5	141.5	179.1		
N	1	12	8	6	8		
IQ							
Mean	86.7	101.7	94.4	87.7	94.9	87.0	92.0
N	3	17	9	6	11	2	1
Reading							
Mean	2.8	5.1	5.2	3.9	6.2	5.1	2.8
N	3	19	9	6	10	2	1
Retardation	4.9	2.6	2.8	4.9	4.6	6.8	10.2
Arithmetic							
Mean	3.0	4.9	4.1	4.1	6.1	4.6	3.4
N	2	19	9	6	11	2	1
Retardation	4.7	2.8	3.9	4.7	4.7	7.3	9.6
Spelling							
Mean	2.2	4.4	4.6	3.9	5.7	4.3	2.6
N	3	19	9	6	11	2	1
Retardation	5.5	3.3	3.4	4.9	5.3	7.6	10.4
Reading (Teacher)							
Mean	1.5	4.3	5.2	4.1	5.0	5.8	2.0
N	2	14	9	6	9	2	1
Retardation	5.2	3.4	2.8	4.7	5.8	6.1	11.0
Arithmetic (Teacher)							
Mean	3.2	4.4	4.0	4.0	5.0	6.0	3.0
N	2	14	8	6	3	2	1
Retardation	4.5	3.3	4.0	4.8	5.8	5.9	10.0
Spelling (Teahcer)							
Mean	1.7	4.0	4.4	4.2	2.2	3.5	2.0
N	2	14	8	6	3	2	1
Retardation	6.0	4.0	3.6	4.6	8.6	8.4	11.0

Table 16C

Age, intelligence, achievement, and retardation by grade

State 36

Variable	Grades 1	2	3	4	5
Chronological Age					
Mean	75.2	88.9	99.4	112.8	125.6
N	13	44	72	97	52
Mental Age					
Mean	68.2	87.6	100.7	108.4	122.5
N	5	41	69	97	51
IQ					
Mean	92.9	98.8	99.7	96.1	96.7
N	13	42	73	96	51
Reading					
Mean	.5	1.3	1.9	2.4	3.0
N	13	44	73	97	52
Retardation	.7	1.1	1.9	2.0	2.5
Arithmetic					
Mean	.4	1.9	2.4	3.1	3.6
N	5	38	63	96	52
Retardation	.8	.5	.8	1.3	1.9
Spelling					
Mean	.7	1.2	1.8	2.3	2.8
N	13	44	73	97	52
Retardation	.5	1.2	1.4	2.1	2.7
Reading (Teacher)					
Mean	0	.4	1.0	1.5	1.9
N	13	43	66	88	39
Retardation	1.2	2.0	2.2	2.9	3.7
Arithmetic (Teacher)					
Mean	0	1.0	.8		1.5
N	1	3	5		7
Retardation	1.2	1.4	2.4		4.0
Spelling (Teacher)					
Mean	.3	.7	.9	.7	
N	9	20	20	7	
Retardation	.9	1.7	2.3	3.7	

Table 17C

Age, intelligence, achievement, and retardation by grades

State 38

Grades

Variable	9	10	11	12
Chronological Age				
Mean	181.4	182.7	179.5	182.5
N	19	64	17	2
Mental Age				
Mean	165.1	172.2	167.2	158.0
N	19	64	17	2
IQ				
Mean	91.3	94.6	93.8	87.0
N	19	64	17	2
Reading				
Mean	6.3	7.2	6.6	6.4
N	19	64	17	2
Retardation	3.8	3.0	3.4	3.8
Arithmetic				
Mean	5.7	6.1	6.1	6.3
N	19	64	17	2
Retardation	4.4	4.1	3.9	3.9
Spelling				
Mean	5.7	7.5	7.8	7.8
N	19	63	17	2
Retardation	4.4	2.7	2.2	2.4
Reading (Teacher)				
Mean	6.2	7.2	7.0	6.8
N	19	64	17	2
Retardation	3.9	3.0	3.0	3.4
Arithmetic (Teacher)				
Mean	6.0	6.4	5.9	6.0
N	19	64	17	2
Retardation	4.1	3.8	4.1	4.2
Spelling (Teacher)				
Mean	6.0	7.5	7.8	7.5
N	19	64	17	2
Retardation	4.1	2.7	2.2	2.7

Table 18C

Age, intelligence, achievement, and retardation by grade

State 40

Variable	Grades 1	2	3
Chronological Age			
Mean	80.6	97.6	103.8
N	5	11	10
Mental Age			
Mean	73.3	81.7	93.4
N	3	6	5
IQ			
Mean	86.7	95.3	93.6
N	3	6	5
Reading			
Mean		1.3	1.6
N		4	8
Retardation		1.9	2.1
Arithmetic			
Mean	1.0	1.2	2.0
N	1	3	8
Retardation	.8	2.0	1.7
Spelling			
Mean		1.3	1.4
N		4	3
Retardation		1.9	2.3
Reading (Teacher)			
Mean	.3	1.3	1.4
N	3	7	11
Retardation	1.5	1.9	2.3
Arithmetic (Teacher)			
Mean	.5	1.5	1.9
N	2	3	5
Retardation	1.3	1.7	1.8
Spelling (Teacher)			
Mean		1.5	1.9
N		2	5
Retardation		1.7	1.8

Table 19C

Age, intelligence, achievement, and retardation by grade

State 41

Variable	Grades											
	1	2	3	4	5	6	7	8	9	10	11	12
Chronological Age												
Mean	79.7	90.0	103.0	115.3	127.2	139.7	153.0	162.8	181.3	190.3	209.0	226.0
N	17	19	21	16	17	10	3	13	10	17	1	1
Mental Age												
Mean	75.6	85.9	101.5	108.1	114.5	141.8	122.0	144.8	156.3	181.8	194.0	192.0
N	9	24	16	10	13	6	3	13	9	17	1	1
IQ												
Mean	94.5	93.8	96.9	91.4	93.5	98.4	84.7	88.3	92.2	96.3	93.0	100.0
N	13	25	18	17	17	11	3	13	10	17	1	1
Reading												
Mean	.2	.7	1.5	2.6	2.6	4.2	4.2	4.8	4.2	7.5	8.8	10.8
N	11	25	18	17	18	8	3	12	10	15	1	1
Retardation	1.5	1.8	2.1	2.0	3.0	2.5	3.6	3.8	5.9	3.3	3.6	3.0
Arithmetic												
Mean	.8	1.0	1.8	2.7	2.9	4.0	4.4	4.6	4.9	6.4		
N	6	17	14	14	13	6	3	12	8	2		
Retardation	.9	1.5	2.8	1.9	2.7	2.7	3.4	3.9	5.2	4.4		
Spelling												
Mean	2.5	.8	1.5	2.7	3.1	4.0	2.9	3.4	3.5	2.0		
N	4	14	21	17	17	8	1	7	9	1		
Retardation	1.4	1.7	2.1	1.9	2.5	2.7	7.8	5.2	6.6	8.8		
Reading (Teacher)												
Mean	.1	.6	1.3	2.8	3.3	4.8	4.9	4.8	4.8	6.6	8.5	9.0
N	14	24	22	16	17	11	13	10	10	14	1	1
Retardation	1.6	1.9	2.3	1.8	2.3	1.9	2.9	3.8	5.3	4.2	3.9	4.8
Arithmetic (Teacher)												
Mean	.3	1.0	1.8	3.0	3.6	4.7	4.0	3.5	3.3	5.5		
N	13	23	19	13	15	9	1	2	2	2		
Retardation	1.4	1.5	1.8	1.6	2.0	2.0	3.8	5.1	6.8	5.3		
Spelling (Teacher)												
Mean	0	.9	1.7	2.8	3.3	4.6	4.5	4.1	3.2	2.0		
N	7	24	22	16	16	11	3	13	10	1		
Retardation	1.7	1.6	1.9	1.8	2.3	2.1	3.3	4.5	6.9	8.8		

Table 20C

Age, intelligence, achievement, and retardation by grade

State 42

Variable	Grades 0	1	2	3	4	5
Chronological Age						
Mean	71.0	79.9	90.3	100.5	115.1	120.0
N	1	14	16	14	7	1
Mental Age						
Mean		60.3	88.0			
N		4	1			
IQ						
Mean	73.0	79.6	94.9	95.4	84.0	88.0
N	1	14	15	14	7	1
Reading						
Mean	.7	.7	1.7	1.8	2.9	2.0
N	1	12	16	14	7	1
Retardation	.2	1.0	.8	1.6	1.7	3.0
Arithmetic						
Mean	.9	.3	1.6	2.3	3.2	3.3
N	1	11	16	14	7	1
Retardation	0	1.4	.9	1.1	1.4	1.7
Spelling						
Mean	.9	.7	1.5	2.1	2.9	2.3
N	1	13	16	14	7	1
Retardation	0	1.0	1.0	1.3	1.7	2.7
Reading (Teacher)						
Mean	0	0	1.3	1.6	2.5	1.5
N	1	13	16	14	7	1
Retardation	.9	1.7	1.2	1.8	2.1	3.5
Arithmetic (Teacher)						
Mean	0	0	1.2	1.9	2.4	2.5
N	1	13	16	14	7	1
Retardation	.9	1.7	1.3	1.5	2.2	2.5
Spelling (Teacher)						
Mean	0	.1	.9	1.7	2.4	2.5
N	1	13	15	13	6	1
Retardation	.9	1.6	1.6	1.7	2.2	2.5

Table 21C

Age, intelligence, achievement, and retardation by grade

State 43

Variable	Grades 0	1	2	3	4	5	6	7
Chronological Age								
Mean	68.3	81.8	93.7	104.9	117.1	130.1	139.2	170.3
N	3	34	39	33	25	24	11	10
Mental Age								
Mean	60.0	79.9	93.6	103.6	114.8	118.5	131.5	133.7
N	3	33	39	32	26	24	11	7
IQ								
Mean	83.0	94.9	96.8	96.6	93.3	89.5	94.0	85.9
N	3	34	39	32	26	24	11	7
Reading								
Mean	.1	1.6	2.3	3.0	3.4	4.1	4.7	4.9
N	3	26	37	32	26	24	11	10
Retardation	.6	.2	.5	.8	1.4	1.7	1.9	4.3
Arithmetic								
Mean	.3	1.5	2.2	3.0	3.5	4.1	4.7	4.5
N	3	25	38	32	26	24	11	10
Retardation	.4	.3	.6	.8	1.3	1.7	1.9	4.7
Spelling								
Mean	.9	1.5	2.2	2.7	3.1	3.9	4.3	3.9
N	3	25	38	32	26	24	11	10
Retardation	0	.3	.6	1.1	1.7	1.9	2.3	5.3

Appendix D

Appendix D includes detailed data on Remedial Emphasis for each of the 21 states.

Table 1D

Remedial Emphasis

Subject	State (2) % Rating			State (3) % Rating			State (4) % Rating			State (7) % Rating		
	1	2	Comb.	1	2	Comb.	1	2	Comb.	1	2	Comb.
Reading	76	11	87	88	6	94	49	14	63	57	9	63
Writing	6	0	6				10	2	12	18	9	27
Arithmetic	7	18	25	6	24	30	5	9	14	37	14	51
Spelling	23	26	49	0	6	6	5	19	24	50	2	52
Language	20	23	43	6	28	34	0	2	2	39	16	55
Behavior	9	11	20	0	4	4	9	3	12	27	13	40
Auditory P.	17	8	25				7	12	19	41	18	59
Visual P.	11	6	17							43	23	66
Haptic P.	0	3	3							12	13	25
Visual Motor	11	8	19				10	32	42	43	15	58
Work Habits	9	17	26	0	8	8	5	3	8	25	9	34
Other	4.5	1.5	6	0	6	6				23	4	27

Table 2D

Remedial Emphasis

Subject	State (10) % Rating			State (13) % Rating			State (14) % Rating			State (16) % Rating		
	1	2	Comb.	1	2	Comb.	1	2	Comb.	1	2	Comb.
Reading	68	12	80	0	58	58	72	0	72	0	3	3
Writing	1	6	7	0	36	36	0	32	32	7	59	63
Arithmetic	11	15	26	58	3	61	12	12	24	0	55	55
Spelling	35	18	53	0	53	53	8	12	20	24	38	62
Language	8	13	21	80	0	80	48	24	72	52	41	93
Behavior	6	5	11	0	8	8	8	20	28	31	24	55
Auditory P.	20	37	57	0	8	8	32	12	44	0	72	72
Visual P.	6	31	37	0	3	3	8	16	24	21	66	87
Haptic P.	1	3	4	0	0	0	0	0	0	28	3	31
Visual Motor	8	9	17	0	0	0	24	20	44	17	24	41
Work Habits	4	19	23	3	56	59	4	12	16	38	21	59
Other	13	2	15	0	58	58	0	8	8	0	0	0

Table 3D

Remedial Emphasis

Subject	State (21) % Rating			State (23) % Rating			State (24) % Rating			State (26) % Rating		
	1	2	Comb.	1	2	Comb.	1	2	Comb.	1	2	Comb.
Reading	88	2	90	55	25	80	71	23	94	53	10	63
Writing	56	14	70	16	11	27	33	39	72	8	4	12
Arithmetic	77	4	81	35	27	62	55	35	90	17	8	25
Spelling	53	16	69	29	15	44	54	30	84	15	13	28
Language	28	33	61	21	16	37	35	33	68	9	4	13
Behavior	39	23	62	8	12	20	48	30	78	11	9	20
Auditory P.	11	33	44	33	11	44	35	19	54	9	11	20
Visual P.	19	26	45	25	11	36	31	20	51	2	7	9
Haptic P.	2	28	30	4	10	14	14	27	41	0	1	1
Visual Motor	11	28	39	21	11	32	33	27	60	2	3	5
Work Habits	54	16	70	7	8	15	41	27	68	3	14	17
Other	12	5	17	10	4	14	2	0	2	3	2	5

Table 4D

Remedial Emphasis

Subject	State (27a) % Rating			State (27b) % Rating			State (27c) % Rating			State (27d) % Rating		
	1	2	Comb.	1	2	Comb.	1	2	Comb.	1	2	Comb.
Reading	48	37	85	58	4	62	41	13	54	33	21	54
Writing	19	37	56	13	4	17	25	19	44	26	21	47
Arithmetic	50	31	81	29	25	54	29	16	45	24	18	42
Spelling	23	21	44	21	4	25	35	19	54	24	13	37
Language	31	29	60	33	4	37	35	27	62	20	11	31
Behavior	31	20	51	50	29	79	26	9	35	17	11	28
Auditory P.	31	22	53	13	25	38	5	5	10	36	18	54
Visual P.	36	22	58	17	21	38	9	23	32	46	9	55
Haptic P.	24	10	34	8	4	12	9	0	9	14	7	21
Visual Motor	44	18	62	8	13	21	19	12	31	47	15	62
Work Habits	30	17	47	17	33	50	26	20	46	25	15	40
Other	12	3	15	33	4	37	38	8	46	17	6	23

Table 5D

Remedial Emphasis

Subject	State (28) % Rating			State (30) % Rating			State (36) % Rating			State (38) % Rating		
	1	2	Comb.	1	2	Comb.	1	2	Comb.	1	2	Comb.
Reading	65	16	81	67	28	95	85	4	89	22	32	54
Writing	10	7	17	18	63	81				1	0	1
Arithmetic	58	3	61	71	16	87	20	20	40	33	41	74
Spelling	29	23	52	53	22	75	19	26	45	1	9	10
Language	0	3	3	37	18	55				35	27	62
Behavior	13	10	23	65	24	89				6	5	11
Auditory P.	16	0	16	20	37	57				1	1	2
Visual P.	68	10	78	43	28	71				1	0	1
Haptic P.				2	51	53						
Visual Motor	3	0	3	16	41	57				1	1	2
Work Habits	19	19	38	65	22	87						
Other	0	3	3	0	0	0				0	1	1

Table 6D

Remedial Emphasis

	State (40) % Rating			State(41) % Rating			State (42) % Rating			State (43) % Rating		
	1	2	Comb.	1	2	Comb.	1	2	Comb.	1	2	Comb.
Reading	100	0	100	75	19	94	70	14	84	42	14	57
Writing	33	7	40	44	24	68	14	33	47	1	1	2
Arithmetic	23	47	70	39	26	65	34	6	40	18	8	26
Spelling	17	3	20	63	23	86	23	22	45	21	10	31
Language	13	3	16	44	16	60	11	33	44	4	1	5
Behavior	3	7	10	38	21	59	17	11	28	1	3	4
Auditory P.	17	3	20	56	23	79	22	41	63	7	9	16
Visual P.	10	7	17	58	16	74	19	36	55	2	2	4
Haptic P.				31	17	48	11	5	16	1	1	2
Visual Motor	13	10	23	54	12	66	11	30	41	5	7	12
Work Habits	13	20	33	59	26	85	13	19	32	3	39	42
Other	7	0	7	19	1	20				1	3	4